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Notice of Allowability	Application No.	Applicant(s)	
	10/563,622	PESHLOV ET AL.	
	Examiner	Art Unit	
	Dieu Hien T. Duong	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03.
2. ☒ The allowed claim(s) is/are 1-9, 11 and 12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____ |
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TRINH DINH
PRIMARY EXAMINER

DETAILED ACTION

1. This Office Action is a response to Applicant's Amendment filed on May 31, 2007. In virtue of this amendment, claim 10 is cancelled; claims 11-12 are newly added; thus, claims 1-9, and 11-12 are currently in the instant application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Susan A. Woffe on July 25, 2007.

The application has been amended as follows:

1. (Currently Amended) An apparatus comprising
a plurality of ~~grounded metal plates, each with~~ conductive layers,
each conductive layer having a plurality of apertures arranged about as a
~~matrix of columns and rows~~ apertures,
a plurality of antenna feed ~~mechanisms~~ mechanism layers
disposed between the plates conductive layers, each including
a plurality of excitation probes about aligned with ~~said the~~ the
apertures for forming antenna radiating elements;
~~a metal plate disposed adjacent the grounded plates, which~~
~~together form a plurality of antenna packages containing two orthogonal~~

and arranged as subarrays with alternating polarizations, the subarrays of a first antenna feed mechanism layer of the plurality of antenna feed mechanism layers being juxtaposed with the subarrays of a second feed mechanism layer of the plurality of antenna feed mechanism layers with different polarizations,

~~the antenna packages apparatus further including an active device layer providing amplification circuit for amplifying of the received signals and being coupled with the groups of radiating elements through a combining block for combining received signals, wherein antenna feed mechanism are arranged as subarrays and the antenna output is connected the received signals being coupled to a twin Low Noise Block (LNB).~~

11. (New) A method of configuring a satellite antenna comprising disposing a plurality of conductive layers having apertures proximate to a plurality of antenna feed mechanism layers, arranging the plurality of conductive layers and feed mechanism layers in alternating layers, configuring the antenna feed mechanisms layers as a plurality of subarrays with different polarizations in a layer, juxtaposing the subarrays of a first antenna feed mechanism layer of the plurality of antenna feed mechanism layers with the subarrays of a second feed mechanism layer of the plurality of antenna feed mechanism layers having a different polarization.

12. (New) A The method of the configuring a satellite antenna of claim 11 comprising ~~disposing a plurality of conductive layers having apertures proximate to a plurality of antenna feed mechanism layers, arranging the plurality of conductive layers and feed mechanism layers in alternating layers, configuring the antenna feed mechanism layers to have tapered radiating elements.~~

Allowable Subject Matter

3. Claims 1-9 and 11-12 allowed.
4. The following is an examiner's statement of reasons for allowance:
Prior art fails to teach or fairly suggest

An apparatus comprising a plurality of excitation probes about aligned with the apertures and arranged as sub-arrays with alternating polarization, the sub-arrays of a first antenna feed mechanism layer of the plurality of antenna feed mechanism layers being juxtaposed with sub-arrays of a second antenna feed mechanism layer of the plurality of antenna feed mechanism layers with different polarization, in combination with the remaining claimed limitations as in independent claim 1 (claims 2-9 are allowed since they are dependent on claim 1).

A method of configuring a satellite antenna comprising arranging the plurality of conductive layers and feed mechanism layers in alternating layers, configuring the antenna feed mechanisms as a plurality of sub-arrays with different polarizations in a layer, juxtaposing the sub-arrays of a first antenna feed mechanism with the sub-arrays of a second feed mechanism having a

different polarization, in combination with the remaining claimed limitations as in claim 11 (claim 12 is allow since it is dependent on claim 11).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Citation of Relevant Prior Art

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Velve (US 7,123,193 B2) discloses vertically-oriented satellite antenna with alternating conductive layers and antenna feed layers.

Sagisaka (US 6,229,481 B1) discloses a dual polarized antenna with vertical and horizontal polarization feeding circuit plates.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu Hien T. Duong whose telephone number is 571-272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2821

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD

Art Unit 2821

A handwritten signature in black ink, appearing to read 'Trinh Dinh', with a long horizontal flourish extending to the right.

TRINH DINH
PRIMARY EXAMINER